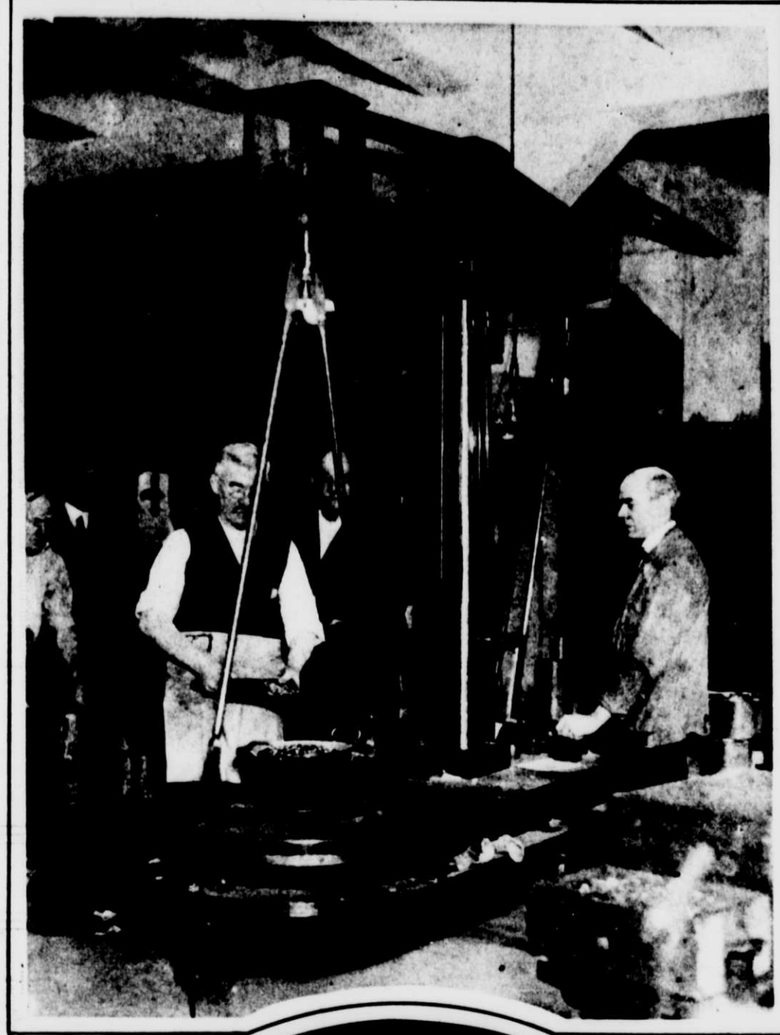
WHERE UNCLE SAM SHOVELS HIS GOLD LIKE GRAIN



Where the gold is weighed.

$50,000 in napoleons on the scales.

SHOVELLING GOLD NAPOLEONS INTO THE MELTING POT.

possible—all play a part in the scheme of operations of which the end is the transforming of foreign coins and bars of gold into other bars that will some day be made into good American eagles.

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High against one wall are piled little boxes about a foot square, bound with iron and sealed with gobs of red wax—the guise in which the gold comes from abroad—and a man is plucking them down and spilling their treasure with blows from an axe. But for the presence of a slouching individual near a doorway, ostentatiously displaying an ugly looking revolver slung at the hip, it would be hard to realize that in these boxes were several millions of dollars.

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Back on the truck again, it was trundled down to the smelting room, a place of swirling smoke and roaring flames, where sparks dance and the faces of men shine in the light of the molten metal. Bricks of the smoking gold lie strewn about the floor, cooling under the feet of the workmen, are stacked along the walls, or turned from sizzling yellow to a dull copper in the moulds.

Occasionally the furnace tender moves the heavy cover that holds the melting pot in place. His hand is protected by a thick mitten of asbestos, for the heat under those furnaces is 2,800 degrees Fahrenheit. He tosses charcoal into the glowing mass to purify it, and a shower of sparks springs toward the ceiling and a puff of smoke eddies through the room and leaves its black smudge on the men's faces.

One of them fills his furnace and then chucks his shovel back in the porcelain bin full of coin.

"I've been shovelling this darn stuff for eight months now, and I'm tired of it," he grumbles. The millions mean little to him.

THE SILVER REFINING ROOM.

A furnace is tapped and the melted gold runs out in a thin yellow stream like water, glittering and sparkling as it drops. A bin of the coins lies near it, and one is tempted to lift a handful and let them run through the fingers, but a glance discloses that one of those lounging individuals with a bit of armament carelessly displayed on the hip is smiling across the room, and one decides that it might be bad form. Preparedness is not an empty word in the Assay Office.

When the bars are cooled they are taken back to the weighing room and the weight again recorded. That ends the process so far as the coin is concerned, for the alloy standards of this country and England and France are so nearly alike that when melted the gold is again ready for the mint. But the bullion has to go through several more processes that smack of alchemy.

The gold and silver are melted together into anodes, strips about a foot long, four inches broad and half an inch thick. The anodes go to the silver refining room, where they are wrapped in muslin bags and hung in long vats in which is a solution of silver nitrate. Opposite each anode is hung a strip of pure silver, and as an electric current runs through the vats the silver passes through the muslin bags and attaches itself to the silver strip. The gold and base metals are left in the bag.

This silver is then scraped off the strips and placed in another vat to drain, on which it assumes an appearance not unlike gray beach sand. This is pure silver and is melted into bars.

The residue, which is chiefly gold, is melted into anodes, which are taken to the gold refining room. The difference in the two rooms is as striking as the difference in the metals. They resemble each other only in the cool silence that is in such marked contrast to the roar of the furnace room far beneath. But where the silver room seems to take to itself the gray and chill characteristics of the metal it purifies the gold room fairly gleams with a subdued glow of yellow.

The vats and their contents shine golden under the light of dim yellow lamps. On one of the vats is a squat old pitcher that is used to dip the solution from one vat to another. Once that pitcher was of white china and might be purchased for 50 cents. But now it is a greenish yellow and worth $50; it is impregnated with gold.

As the gold passes from the anodes to the strips of pure gold hung opposite them in the vats it does not crystallize like the silver, but assumes curious stalactite forms, many of which are very beautiful and glisten as the moisture drips from them. Not all the gold is refined in this way; there are left in the bottom of the vats heaps of slag, a black, unattractive mess which would be kicked aside if it lay in the street, but which is about 90 per cent. pure gold. This is treated by another electric process and the last bit of the precious metal extracted from it.

In fact, nothing but the stray traces of iron go to waste, so searching is the system. Copper, platinum and iridium are all reclaimed, and there is less than $20 loss of gold in a year, much less than is allowed by law. Even that yellow pitcher will some day be smashed up and the gold reclaimed. The clothes of the workmen, the sweepings from the floors, the dust that collects on the walls, are all saved and considerable amounts of gold recovered. When the old Assay Office was torn down the contractors made a neat sum by knocking the soot from the old stack and having it refined, and once, years ago, the roofs of nearby buildings were cleaned of the accumulations of dust and soot and gold reclaimed.

When the gold has been reduced to absolute purity it is melted into bars that range in value from $10,000 to $100, stamped with the seal of the Assay Office, and with the weight and value. Then they are either stored in the large vault, a great square mass of steel bedded on solid rock, around which watchmen patrol day and night, or placed in the small vault, called "the store." It is from the store that jewellers and other users of gold buy the metal as they need it.

The name is a good one, for the inside of the vault is lined with shelves on which the bricks repose in order according to their sizes, like canned goods in a grocery, ranging from little bars that fit in the palm of the hand to bars that make a heavy weight for a strong man.

Not the least interesting room in the building is the testing room, where samples taken from the coins and bars are weighed to find their percentage of gold. Delicate instruments shine against the walls, enclosed in glass cases for protection, scales so fine that a pencil dot or an eyelash can be weighed. But the careful calculators are far too busy these days to be engaged in such frivolous occupations.

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That time of stress was hard on the office force. Supt. Bovie manages to turn over a check for the full amount of the gold within four days after it is received, but to do that up to the time the rush was somewhat abated necessitated working late at night and on Sundays. When the gold is first weighed a check on the Treasurer of the United States is given for 90 per cent. of the indicated value, and when it has been refined a check for the balance, minus a charge for the work, is turned over. On amounts of more than $1,000,000, and they have been many in the last year, 99 per cent. of the value is paid, where the depositor is a firm of recognized responsibility.

POURING THE MOLTEN GOLD FROM THE MELTING POT INTO MOULDS.

VERNE M. BOVIE, SUPERINTENDENT OF THE U. S. ASSAY OFFICE.

New York Assay Office Glutted With Wealth War Has Brought

THERE is an old board runway leading up from Pine street, just east of Nassau, to a building set far back from the street, an unpretentious wooden walk in marked contrast to the stately lines of the Sub-Treasury next door and the imposing fronts of banks and towering office buildings near by. But up that walk rolls day after day a golden stream, the motive power of the financial swirl about it, the cause of the dizzy upward jump of war stocks in the exchange, a stone's throw away, the visible evidence of the wealth that is pouring into the United States from the warring nations of Europe.

This walk is the entrance to the United States Assay Office, whose great vaults cannot hold all the gold that has been sent here in the last year to pay for the munitions of war which are choking the docks of New York port and turning gray the hair of railroad traffic managers because of the snarl in freight yards. So fast did the golden hoard come from the treasuries of Europe at one time that Superintendent Verne M. Bovie, the man responsible for the security of this vast wealth, was compelled to call a halt.

During the year up to December 21 there were deposits of $216,000,000 in gold in the New York Assay Office, about $50,000,000 more than was received in all the assay offices of the country in the same period of last year. In eleven months of last year $52,808,229 was received here from abroad, less than a quarter of this year's deposits. The result has been that vault space has been requisitioned in the Sub-Treasury to hold $130,000,000 in bars, a solid cord of gold, which could not be kept in the Assay Office. And great fortunes continue to come in every day.

A place of wonderful alchemy to the layman is this Assay Office in full blast. There the coins with which he may be more or less familiar turn under the wand of the modern assayer into strange and beautiful shapes, in some of which he would hardly recognize them as the yellow metal on which the money systems of the world are based. Huge scales so delicate that they respond to a weight one cannot feel in the hand and register with ease a load three men could not lift; powerful blast furnaces whose dull roar sounds all day; quiet rooms full of sensitive shining instruments for calculations so minute that loss is almost impossible—all play a part in the scheme of operations of which the end is the transforming of foreign coins and bars of gold into other bars that will some day be made into good American eagles.

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That is one of the strangest things of all the strange things in this building, the apparent indifference of the workers to the huge sums that pass through their hands. The lure of gold is conspicuous by its absence.

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